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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,774	04/13/2007	Peter Toma	RR-624 PCT/US	7852
20427	7590	11/24/2009	EXAMINER	
RODMAN RODMAN 10 STEWART PLACE SUITE 2CE WHITE PLAINS, NY 10603			TURNER, SONJI LUCAS	
			ART UNIT	PAPER NUMBER
			1797	
			MAIL DATE	DELIVERY MODE
			11/24/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/585,774	Applicant(s) TOMA, PETER	
	Examiner SONJI TURNER	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/13/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 32-53 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☒ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-53 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date : 11/14/2008; 8/8/2008; 4/20/2007.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I in the reply filed on September 24, 2009 is acknowledged.
2. Applicant has amended claim 17 to depend from claim 1. Therefore, Group I now includes claims 17-31, and Group II no longer exists. Claim 1 has been amended to include the recitation "at least one flow path assembly."
3. Applicant's traversal is found in remarks at the bottom of page 12 to midway page 14. Applicant submits that unity of invention exists between the elected Group I (now amended) and Group III.
4. The traversal has not been found to be persuasive. The claims of Groups I and Group III do not relate to a single general inventive concept because they lack the same, or corresponding, special technical features. Group III lacks the common technical features of (1) at least one flowpath assembly, (2) a flow conditioner, and (3) a drainage mechanism each of which are identified and specifically recited as such in the independent claim 1 of Group I.
5. The restriction requirement is still deemed proper and is therefore made FINAL.

Information Disclosure Statement

6. The information disclosure statement filed August 8, 2008 fails to comply with 37 CFR 1.98(a)(1), which requires the following: (1) a list of all patents, publications, applications, or other information submitted for consideration by the Office; (2) U.S. patents and U.S. patent application publications listed in a section separately from citations of other documents; (3) the application number of the application in which the information disclosure statement is being

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submitted on each page of the list; (4) a column that provides a blank space next to each document to be considered, for the examiner's initials; and (5) a heading that clearly indicates that the list is an information disclosure statement. The information disclosure statement has been placed in the application file, but the information referred to therein has not been considered.

The following submitted non-patent literature document was not listed on IDS filed August 8, 2008:

Weingarten, J.S. et. al.; "Development and Testing of a Compact Liquid-Gas Auger Partial Separator for Downhole or Surface Applications"; February 1997; SPE Production and Facilities; pp. 34-40.

Drawings

7. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "gravity separation vessel" recited in claims 12 and 27 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
8. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because:
 - a. reference characters "30" and "36" have both been used to designate **collection vessel.**
 - b. reference characters "130" and "136" have both been used to designate **collection vessel.**
 - c. reference characters "135" and "146" have both been used to designate **drainage mechanism.**

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- d. reference character “30” has been used to designate both **flow conditioner** and **collection vessel**.
- e. reference character “130” has been used to designate both **flow conditioner** and **collection vessel**.
- f. reference character “135” has been used to designate both **conditioner/distributor** and **drainage mechanism**.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

- 9. Claims 13 and 28 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to

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cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim language recites intended use and does not further limit the structure of the instant invention.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 10, 11, 12, 25, 26, and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Claims 10 and 25 recite the limitation "the drained collected droplets" in the last line of the claims. There is insufficient antecedent basis for this limitation in the claims.

12. Claims 11 and 26 recite the limitation "the drained collected droplets" and "the drained gas stream" in lines 4 and 5 of the claims. There is insufficient antecedent basis for these limitations in the claims.

13. Claims 12 and 27 recite the limitation "the drained collected droplets" and "the drained gas stream" in lines 2 and 3 of the claims. There is insufficient antecedent basis for these limitations in the claims.

14. Claims 11 and 26 each recite the limitation "the drainage mechanism drains **the gas stream** from the flowpath" in lines 2-3 of the claims. There is insufficient antecedent basis for this limitation in the claims. Furthermore, it is not clear how the drainage mechanism functions to drain the gas stream from the flowpath(s) since claim 1 at part (d) recites the function for the drainage mechanism is "for draining the collected droplets from the collector surface."

Claim Rejections - 35 USC § 102

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

16. Claims 1-4, 6-13, 16, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by one of the following prior art references: Stockton (US 3,626,673), Sillers (US 1,928,706), Higashi (US 4,919,696), Kuhn (US 3,240,001), Dixon (US 2,349,944), and/or Lavery (US 3,413,778).

See Stockton figs. 1-6; col. 1, lines 50-60; col. 2; col. 3, lines 10-45; col. 4, lines 10-20;

See Sillers figs. 1-2; p.1, lines 20-50, 75-80;

See Higashi figs. 1-2; col. 2, lines 20-30; col. 3, lines 40-50; col. 4, lines 5-40;

See Kuhn figs. 1-5; col. 2, lines 10-25, 35-40, 45-55, 70;

See Dixon figs. 1-10; pp. 2-4; and

See Lavery figs. 1-15; col. 1, lines 55-70; col. 8, lines 30-50.

17. Stockton, Sillers, Higashi, Kuhn, Dixon, and Lavery teach an apparatus for removing liquid droplets from a gas stream. The apparatus comprises at least one flowpath assembly, wherein each flowpath assembly is comprised of a flowpath for the gas stream, the flowpath comprising a flowpath inlet; a collector surface, positioned adjacent to the flowpath so that the gas stream is in communication with the collector surface as the gas stream passes through the flowpath, for collecting the droplets as collected droplets; a flow conditioner in communication with the flowpath inlet, for conditioning the gas stream to provide substantially turbulent and generally axial flow of the gas stream through the flowpath; and a drainage mechanism

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associated with the collector surface, for draining the collected droplets from the collector surface as recited in claim 1.

18. Each prior art reference teaches a flowpath defined by the collector surface as in claim 2 and a collector surface comprised of a plurality of generally planar surface as in claims 3 and 4.

19. Stockton, Sillers, Higashi, and Kuhn each teach the drainage mechanism comprised of at least one aperture defined by the collector surface as in claim 6, the drainage mechanism comprised of a plurality of slits defined by the collector surface as in claim 7, and the flowpath further comprised of a flowpath end wherein the slits are spaced axially along the collector surface between the flowpath inlet and the flowpath end as in claim 8.

20. Regarding claim 9, Sillers discloses the flowpath further comprised of a flowpath end positioned below the flowpath inlet.

21. Regarding claim 10, each prior art reference teaches apparatus further comprising a collection vessel associated with the drainage mechanism, for receiving the drained collected droplets.

22. Regarding claim 11, each prior art reference discloses the apparatus wherein the flowpath is further comprised of a flowpath end and a collection vessel associated with the drainage mechanism, for receiving the drained collected droplets.

23. Regarding claim 12, Higashi discloses the collection vessel that is capable of functioning as a gravity separation vessel.

24. Each prior art reference discloses the apparatus where the collector surface is wettable by the droplets as in claim 13.

25. Regarding 16, Higashi discloses the apparatus of claim 2 further comprising a cooler.

Claim Rejections - 35 USC § 103

26. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

27. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over each of the prior art reference as applied to claims 2 above. Each of the prior art references disclose the claimed invention except for the cylindrical shape for the surface with the recited dimension of claim 15. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the shape, since it has been held that if the claimed device and the prior art device do not perform differently then changing relative dimension involves only routine skill in the art. *Gardner v. TEC Systems, Inc*, 200 USPQ 777. Furthermore, Stockton teaches the shape for the collector surface is a design choice at column 3 lines 55-65.

28. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art references as applied to claim 2 above, and further in view of Reid (US 3,616,623).

The previously listed prior art references are silent regarding a collector surface that is a textured surface. However, Reid discloses such at column 2, lines 50-65. The references are analogous art. It would have been obvious to one of ordinary skill in the art at the time of the present invention to texture the collector surfaces of each of the prior art references listed above as disclosed in Reid in order for the impinging droplets to collect with other droplets to promote movement of the collected droplets for discharge from the apparatus.

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29. Claims 17-19, 21-23, 25-28, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higashi as applied to claims 2, 3, 6-8, 10-13, and 16 above. Higashi also discloses a distributor associated with each of the flowpath inlets (as in claim 17) in column 3 at lines 60-65, also see fig. 1, and a cooler associated with each of the flowpath inlets (as in claim 31) in column 3 at lines 40-50. However, Higashi fails to teach a plurality of parallel flowpath assemblies. Stockton does teach a plurality of parallel flowpath assemblies designed to fit the vessel in column 3 at lines 35-40. As such it would have been obvious to one of ordinary skill in the art at the time of the present invention to include a plurality of assemblies in the apparatus of Higashi as taught by Stockton (col. 4, lines 25-28) to carry out the drainage objectives of the instant invention.

30. Claims 20 and 30 rejected under 35 U.S.C. 103(a) as being unpatentable over Higashi as applied to claim 17 above. The claimed invention is disclosed above except for the cylindrical shape for the surface with the recited dimension of claim 30. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the shape, since it has been held that if the claimed device and the prior art device do not perform differently then changing relative dimension involves only routine skill in the art. *Gardner v. TEC Systems, Inc*, 200 USPQ 777. Furthermore, Stockton teaches the shape for the collector surface is a design choice at column 3 lines 55-65.

31. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Higashi as applied to claim 17 above, and further in view of Sillers. The teachings for the combined invention are set forth above but are silent regarding the positions of the flowpath inlet and flowpath end. However, Sillers discloses the flowpath further comprised of a flowpath end

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positioned below the flowpath inlet. As such, it would have been obvious to one of ordinary skill in the art at the time of the present invention to use the teaching disclosed in Sillers at page 1 and line 45 for permitting liquid to flow from the extractor unit into the reservoir with a reasonable expectation for success.

32. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Higashi as applied to claim 17 above, and further in view of Reid. The teachings are set forth above for the combined invention fail to disclose a collector surface that is a textured surface. However, Reid discloses such in column 2 at lines 50-65. The references are analogous art. As such, it would have been obvious to one of ordinary skill in the art at the time of the present invention to texture the collector surfaces of the invention as disclosed in Reid in order for the impinging droplets to collect with other droplets to promote movement of the collected droplets for discharge from the apparatus with a reasonable expectation for success.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and is listed on PTO-892 (Notice of References Cited).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sonji Turner whose telephone number is 571-272-1203. The examiner can normally be reached on Monday - Friday, 10:00 am – 2:00 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

st

11/18/2009

/Duane Smith/
Supervisory Patent Examiner, Art Unit 1797